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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/939,008  | 08/24/2001  | Clark I. Bright      | 56760US008          | 3576             |
| 7590  | 04/20/2006  |                      | EXAMINER            |                  |
| Office of Intellectual Counsel<br>3M Innovative Properties Company<br>PO Box 33427<br>St. Paul, MN 55133-3427 |             |                      | JACKSON, MONIQUE R  |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 1773                |                  |

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/939,008             | BRIGHT, CLARK I.    |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Monique R. Jackson     | 1773                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 17 January 2006.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 39,40,50,73-76 and 79-146 is/are pending in the application.
- 4a) Of the above claim(s) 39,40,50,73-76,84-99 and 101-146 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 79-83 and 100 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

|  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date: _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/05, 2/06, 3/06</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submissions filed on 11/21/05 and 1/17/06 have been entered. Claims 39, 40, 50, 73-76 and 79-146 are pending in the application. Claims 39, 40, 50, 73-76, 84-99 and 101-146 have been withdrawn from consideration.
2. The substitute specification filed 11/21/05 and the replacement drawings filed 1/17/06 have been received and entered. The drawings are acceptable.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 103***

4. Claims 79-83 and 100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheats et al (USPN 6,146,225) in view of JP 06-136159A (JP'159) and Ritchie et al (USPN 4,977,013.) Sheats et al teaches a transparent, flexible permeability barrier for organic electroluminescent devices wherein a device is provided on a plastic substrate and a multilayer barrier coating is provided on either or both sides of the devices, wherein the coating is preferably formed from two PML layers (*wherein a PML layer is a vacuum deposited in-situ polymerized organic layer*) with an inorganic oxide or nitride layer sandwiched therebetween (Abstract; Col. 2, line 39-Col 3, line 67.) Sheats et al also teach that the device comprises an

anode layer 117 of conductive ITO that may be formed on a PML layer provided as a smoothing layer on the substrate and that a getter material such as a metallic lithium or other reactive metal may be added to the oxide or nitride layer or may be added as a separate layer between the multilayer barrier and the device (Col. 5, lines 18-Col. 6, lines 11.) Though Sheats discloses the use of a multilayer barrier of PML/oxide/PML, Sheats et al do not specifically teach the reverse sandwich structure of oxide/PML/oxide, or that the transparent oxide is a conductive transparent oxide. However, the use of transparent conductive layers on plastic substrates to provide the desired conductivity or resistivity such as for interference or antistatic properties in addition to transparency is well known in the art and further the use of transparent conductive oxides, such as ITO, in combination with other oxide or nitride layers in barrier coatings or films for display devices is also known in the art as taught by JP' 159 and Ritchie et al. It is particularly noted that Ritchie et al teach that the barrier coating may comprise two non-conductive or dielectric layers sandwiching a conductive layer, similar to Sheats, or the conductive and nonconductive layers may be reserved (i.e. two conductive layers sandwiching a nonconductive or dielectric layer as in the instant claims), and also that multiple layers of each may be utilized such as two conductive layers and two nonconductive layers (Col. 4-5, Col. 7.) Hence, one having ordinary skill in the art at the time of the invention would have been motivated to utilize conductive and/or nonconductive oxide layers in the invention taught by Sheats et al, utilizing routine experimentation to determine the optimum number of layers and layer structure to provide the desired barrier and conductive properties for a particular end use, wherein ITO is a conventional and commonly preferred transparent conductive oxide material.

***Response to Arguments***

Applicant's arguments with respect to claims 79-83 and 100 have been considered but are moot in view of the new ground(s) of rejection. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508. The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Monique R. Jackson  
Primary Examiner  
Technology Center 1700  
April 14, 2006